AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1. (Previously amended) A communication circuit, comprising:

a signal processing circuit arranged to produce a first plurality of data signals and receive a second plurality of data signals, the first plurality of data signals including an identification signal that identifies one of the communication circuit and the remote transmitter;

a timing circuit coupled to receive an initial value corresponding to a predetermined time, the timing circuit arranged to produce a first control signal in response to receiving the identification signal within the predetermined time and arranged to produce a second control signal in response to not receiving the identification signal within the predetermined time;

a transmit circuit coupled to receive the first plurality of data signals, the transmit circuit arranged to transmit each data signal of the first plurality of data signals on a respective transmit frequency in a predetermined sequence of transmit frequencies; and

a receive circuit coupled to receive each data signal of the second plurality of data signals from a remote transmitter on the respective transmit frequency in the predetermined sequence, the receive circuit applying the second plurality of data signals to the signal processing circuit.

2. (Original) A communication circuit as in claim 1, wherein the remote transmitter transmits said each data signal of the second plurality of data signals from a plurality of antennas.

3. (Original) A communication circuit as in claim 2, wherein each data signal of the second plurality of data signals is multiplied by a weighting coefficient corresponding to a

respective antenna of the plurality of antennas, and wherein each said weighting coefficient has a value corresponding to a received signal strength at the respective antenna.

4. (Original) A communication circuit as in claim 2, wherein each data signal of the second plurality of data signals is multiplied by a weighting coefficient corresponding to a respective antenna of the plurality of antennas, and wherein a first weighting coefficient corresponding to a first antenna of the plurality of antennas has a value of one, and a second weighting coefficient corresponding to a second antenna of the plurality of antennas has a value of zero.

5. (Original) A communication circuit as in claim 1, wherein the communication circuit is arranged to form a piconet with the remote transmitter.

6. (Original) A communication circuit as in claim 1, wherein the remote transmitter is a master device and wherein the communication circuit is a slave device.

7. (Original) A communication circuit as in claim 6, wherein the first plurality of data signals comprises a plurality of data bits that identify the slave device to the master device.

8. (Original) A communication circuit as in claim 1, wherein the signal processing circuit receives the first plurality of data signals from one of a cordless phone handset, a cell phone, a personal digital assistant, a digital camera, and a computer peripheral.

9. (Original) A communication circuit as in claim 8, wherein the computer peripheral is one of a printer, a scanner, a fax machine, and another computer.

10. (Original) A communication circuit as in claim 1, wherein the signal processing circuit applies the second plurality of data signals to one of a cordless phone base station, a local area network access point, a computer, and a bridge to other networks.

11-12. (Cancelled)

13. (Previously amended) A communication circuit as in claim 1, wherein the receive circuit receives each data signal of the second plurality of data signals on the respective transmit frequency in the predetermined sequence in response to the first control signal, and wherein the receive circuit receives each data signal of the second plurality of data signals on the respective transmit frequency in a sequence of transmit frequencies different from the predetermined sequence in response to the second control signal.

14. (Previously amended) A communication circuit, comprising:

a plurality of antennas coupled to receive a first data signal from a remote transmitter on a respective frequency of a frequency hopping pattern and transmit a second data signal on the respective frequency;

a measurement circuit coupled to receive the first data signal from the plurality of antennas, the first data signal including an identification signal that identifies one of the communication circuit and the remote transmitter, the measurement circuit arranged to measure the first data signal from each antenna and produce a respective weighting coefficient corresponding to said each antenna;

a timing circuit coupled to receive an initial value corresponding to a predetermined time, the timing circuit arranged to produce a first control signal in response to receiving the identification signal within the predetermined time and arranged to produce a second control signal in response to not receiving the identification signal within the predetermined time; and

a transmit circuit coupled to receive the second data signal, the transmit circuit arranged to multiply the second data signal by the respective weighting coefficient corresponding to said each antenna, thereby producing a respective weighted second data signal corresponding to said each antenna, the transmit circuit arranged to apply the respective weighted second data signal to the corresponding said each antenna.

15. (Original) A communication circuit as in claim 14, wherein the respective weighting coefficient corresponding to said each antenna has a value corresponding to a received signal strength of the first data signal at said each antenna.

16. (Original) A communication circuit as in claim 14, wherein a first weighting coefficient corresponding to a first antenna of the plurality of antennas has a value of one and a second weighting coefficient corresponding to a second antenna of the plurality of antennas has a value of zero.

17. (Original) A communication circuit as in claim 14, wherein the plurality of antennas are spaced apart by at least 2 centimeters and by no more than 15 centimeters.

18. (Original) A communication circuit as in claim 17, wherein the plurality of antennas consists of two antennas.

19. (Original) A communication circuit as in claim 14, wherein the communication circuit is arranged to form a piconet with the remote transmitter.

20. (Original) A communication circuit as in claim 19, wherein the remote transmitter is a remote transmitter of a slave device and the communication circuit is a master device.

21. (Original) A communication circuit as in claim 14, wherein the first data signal comprises a plurality of data bits that identify the remote transmitter to the communication circuit.

22. (Original) A communication circuit as in claim 14, wherein the remote transmitter is coupled to one of a cordless phone handset, a cell phone, a personal digital assistant, a digital camera, and a computer peripheral.

23. (Original) A communication circuit as in claim 22, wherein the computer peripheral is one of a printer, a scanner, a fax machine, and another computer.

24. (Original) A communication circuit as in claim 14, wherein the transmit circuit is coupled to one of a cordless phone base station, a local area network access point, a computer, and a bridge to other networks.

25. (Original) A communication circuit as in claim 14, further comprising:

a summation circuit; and

a receive circuit coupled to receive the first data signal, the receive circuit arranged to multiply the first data signal by the respective weighting coefficient corresponding to said each antenna, the receive circuit arranged to apply said each first data signal to said summation circuit.

26-27. (Cancelled)

28. (Currently amended) A communication circuit as in claim ~~27~~ 14, wherein the transmit circuit produces the second data signal in a first sequence of transmit frequencies in response to the first control signal, and wherein the transmit circuit produces the second data signal in a second sequence of transmit frequencies different from the first sequence in response to the second control signal.

29-34. (Cancelled)

35. (Currently amended) A method of communicating with a remote communication circuit, comprising the steps of:

transmitting a first plurality of data signals to the remote communication circuit on a first sequence of respective frequencies wherein the first plurality of data signals includes an identification signal that identifies at least one communication circuit;

receiving a second plurality of data signals from the remote communication circuit on the first sequence of respective frequencies; ~~A method as in claim 34, further comprising the steps of:~~

producing a first control in response to receiving the identification signal within a predetermined time; and

producing a second control signal in response to not receiving the identification signal within the predetermined time.

36. (Original) A method as in claim 35, further comprising the steps of:

receiving the second plurality of data signals from the remote communication circuit on a first sequence of respective frequencies in response to the first control signal; and

receiving the second plurality of data signals from the remote communication circuit on a second sequence of respective frequencies different from the first sequence in response to the second control signal.

37-52. (Cancelled)